

Fig. 5

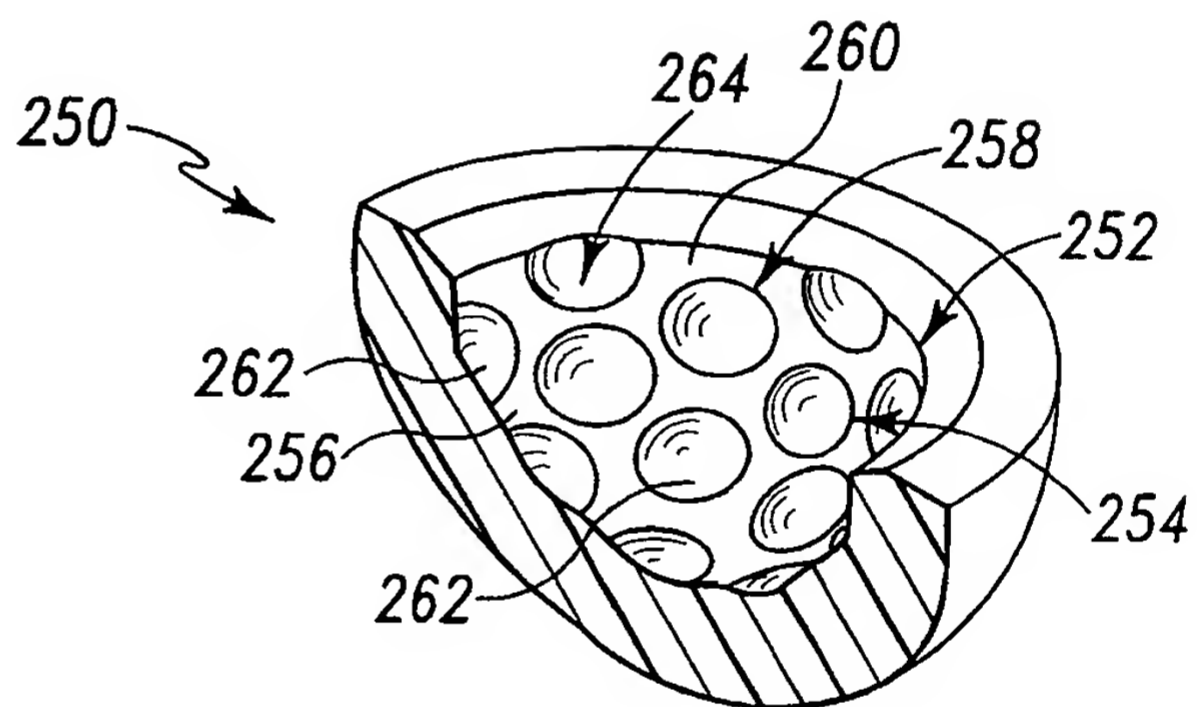


Fig. 6

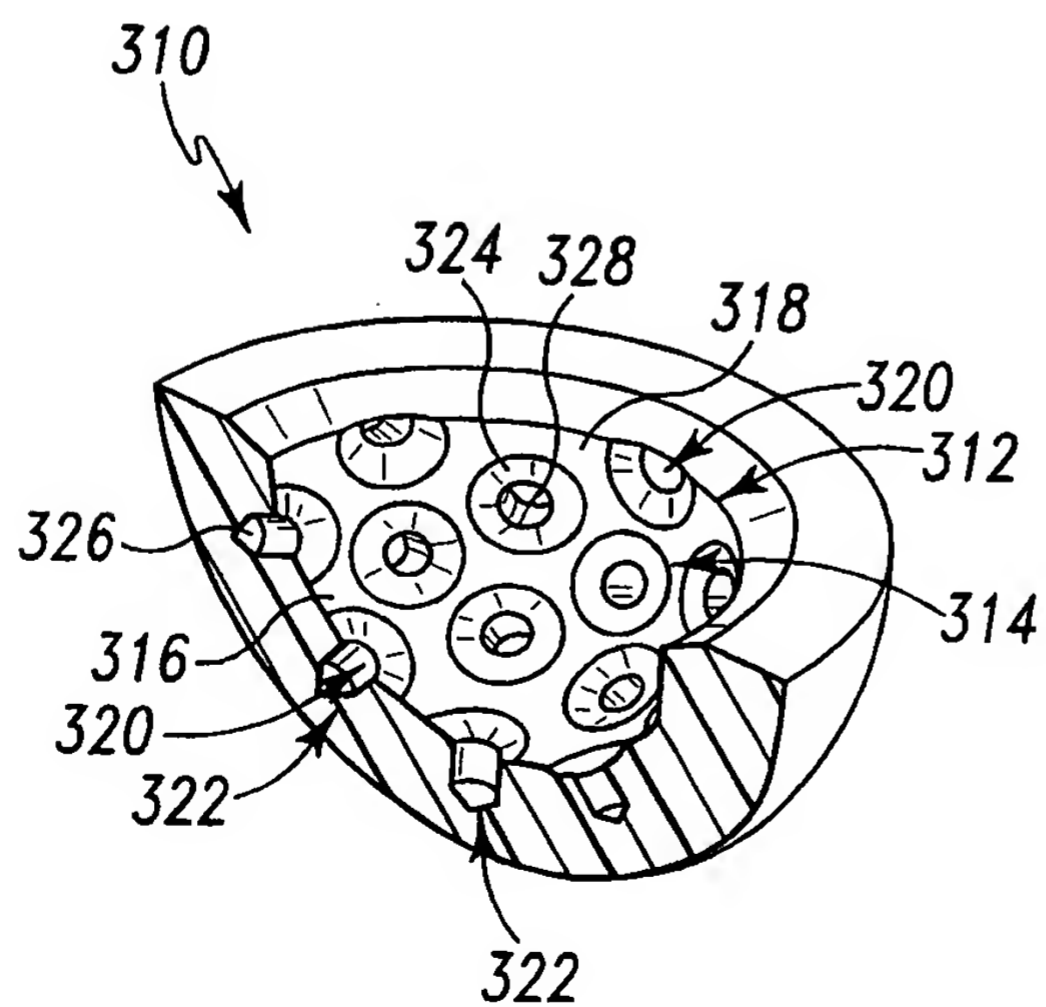


Fig. 7

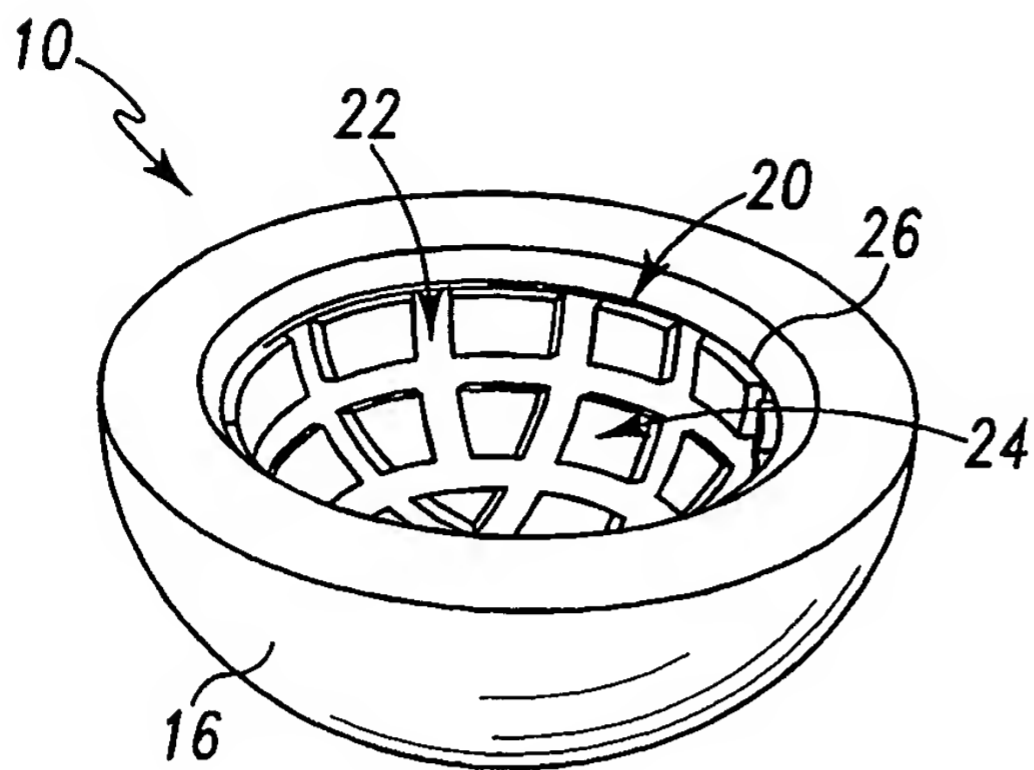


Fig. 1

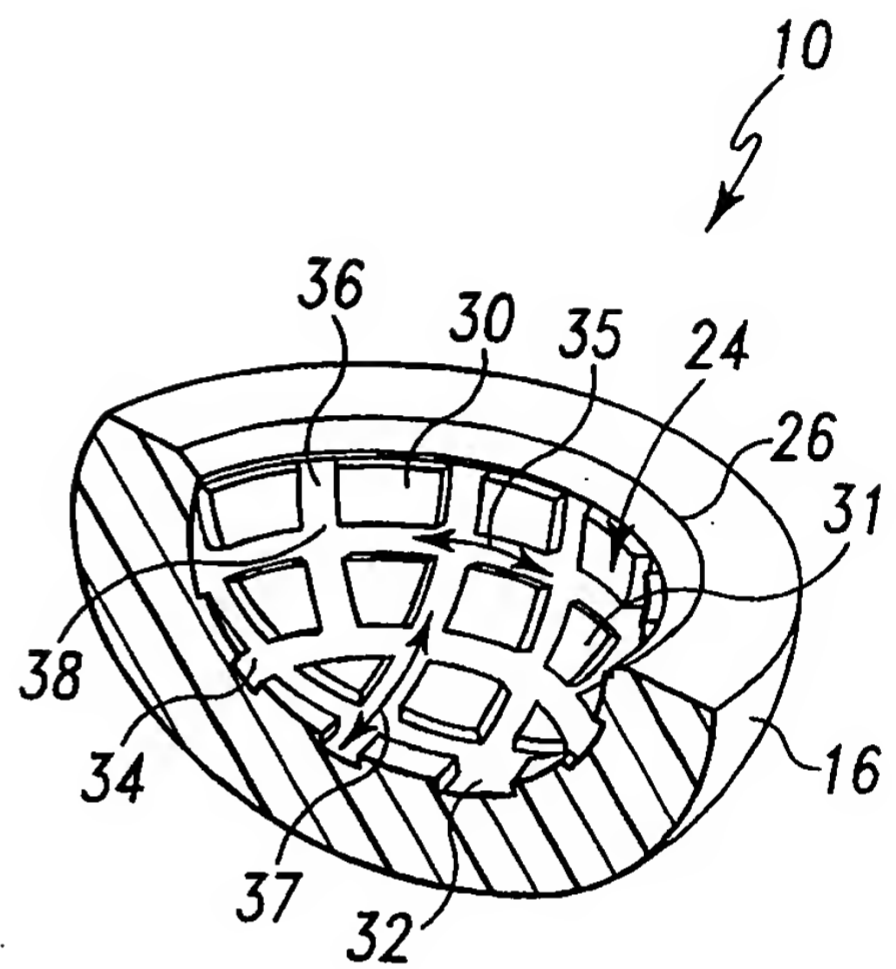


Fig. 2

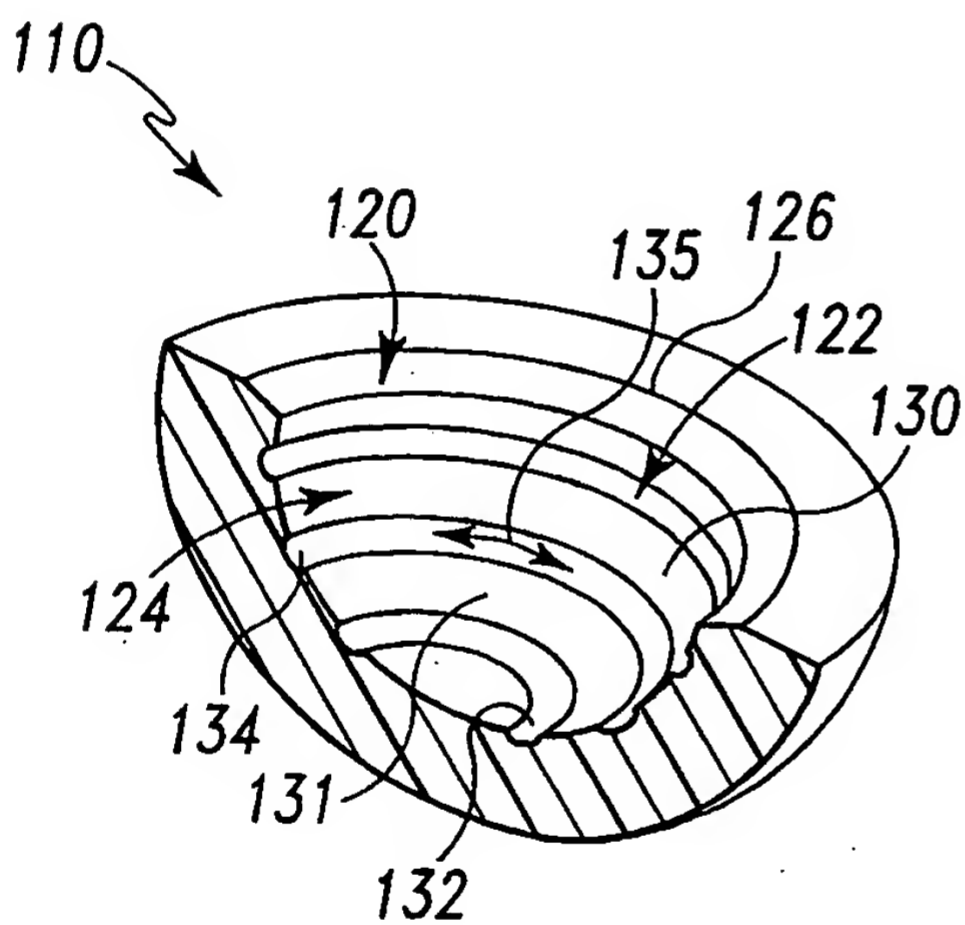


Fig. 3

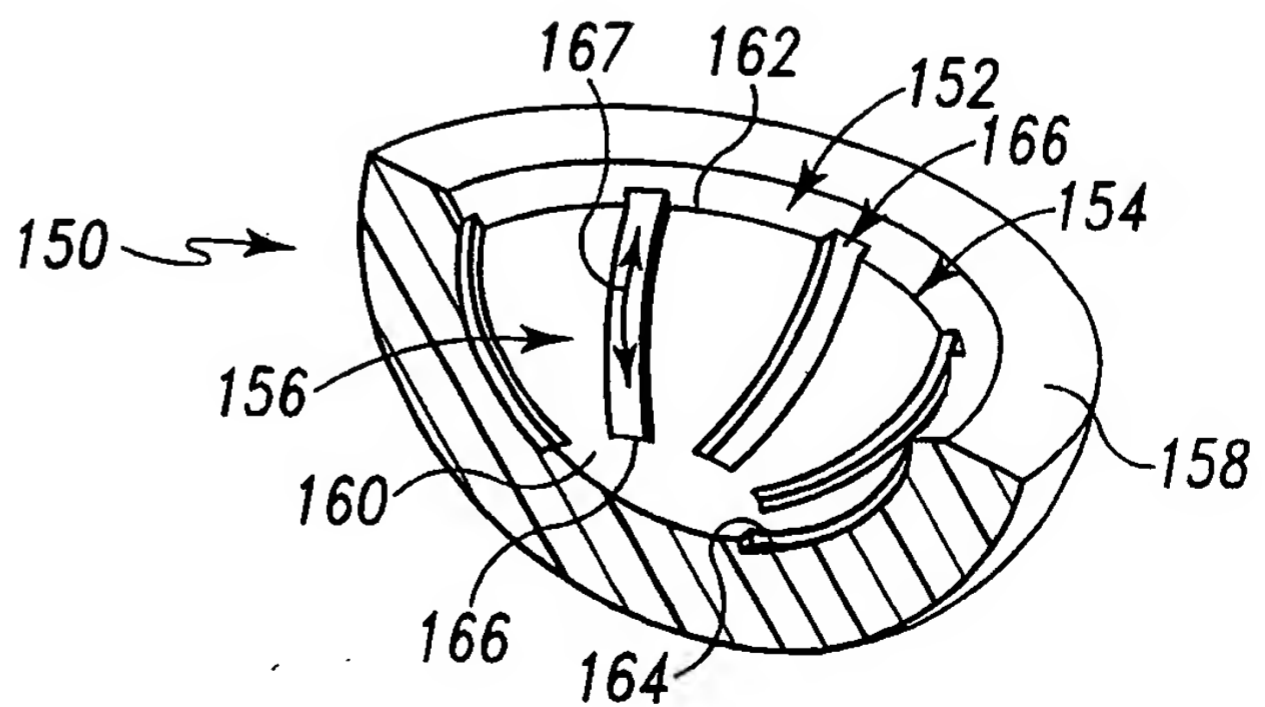


Fig. 4

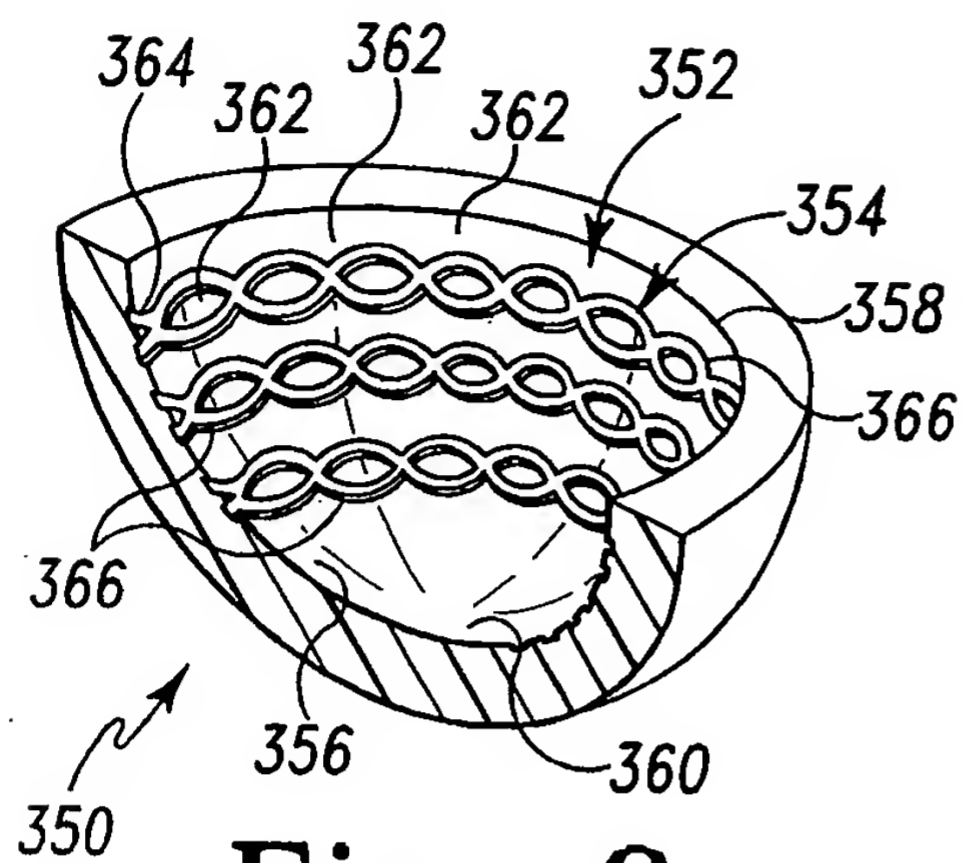


Fig. 8

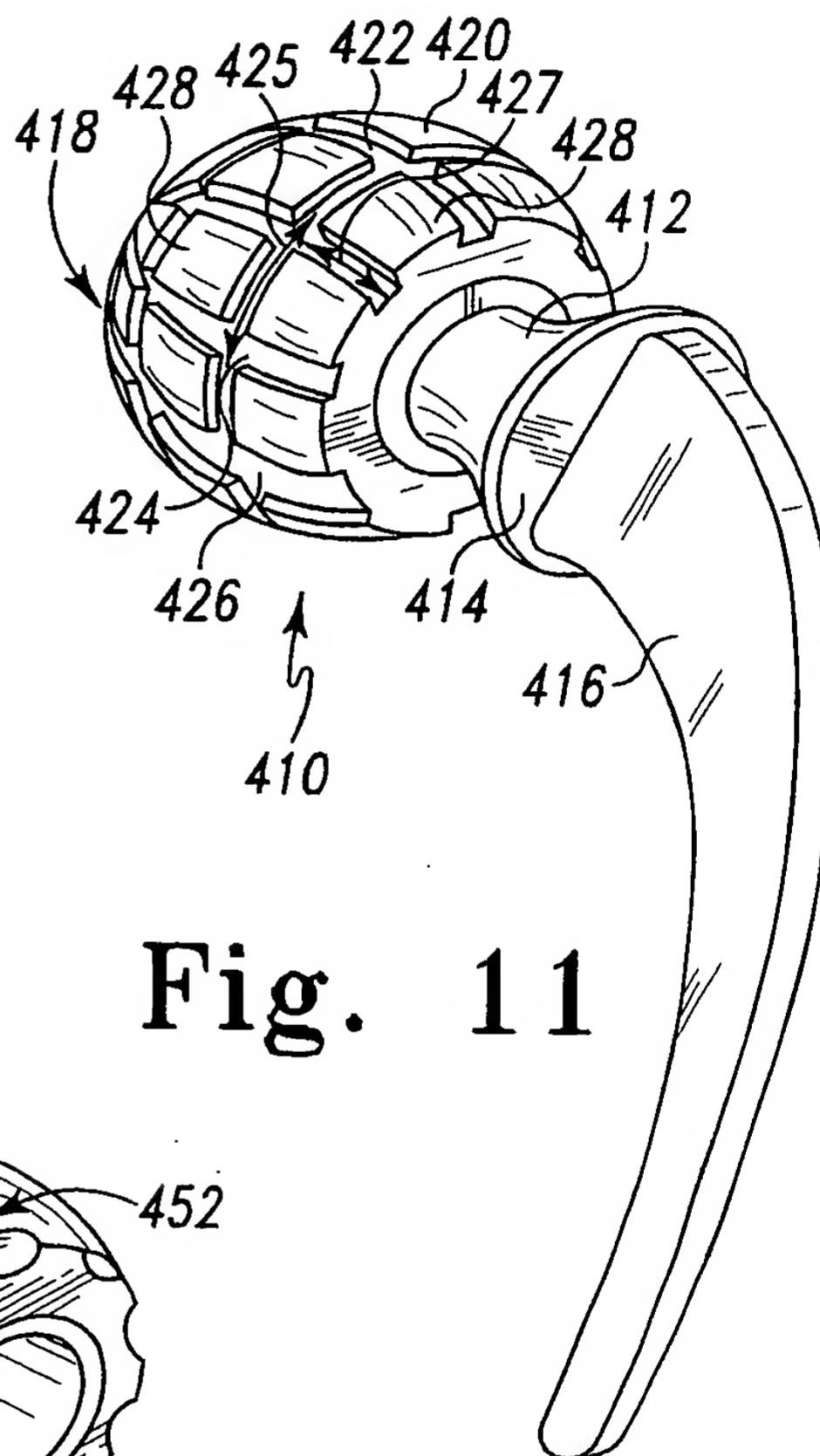


Fig. 11

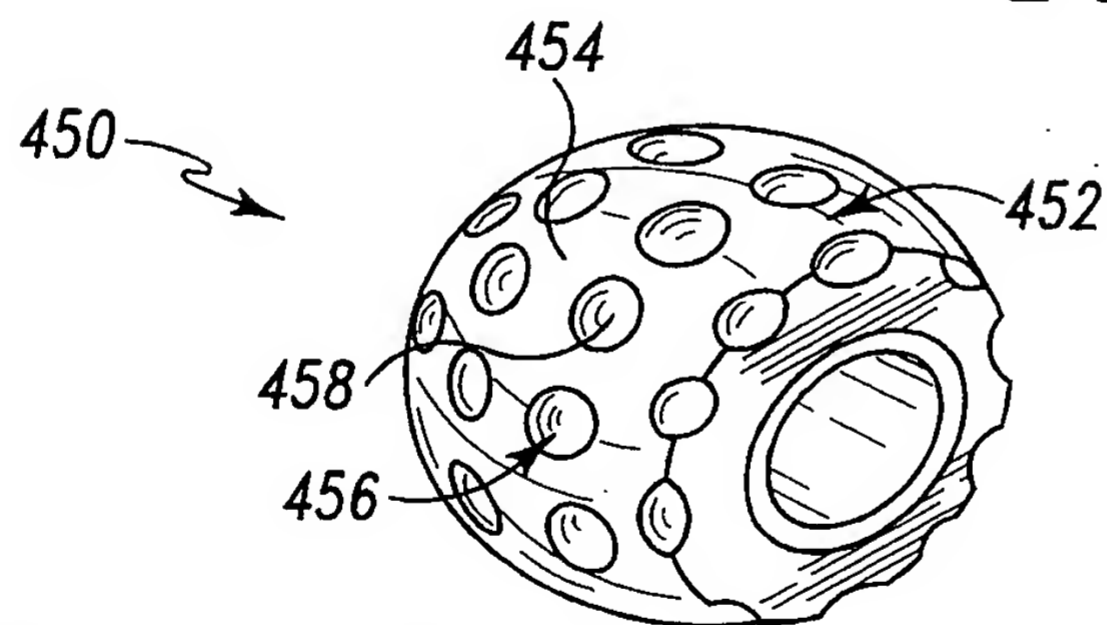


Fig. 12

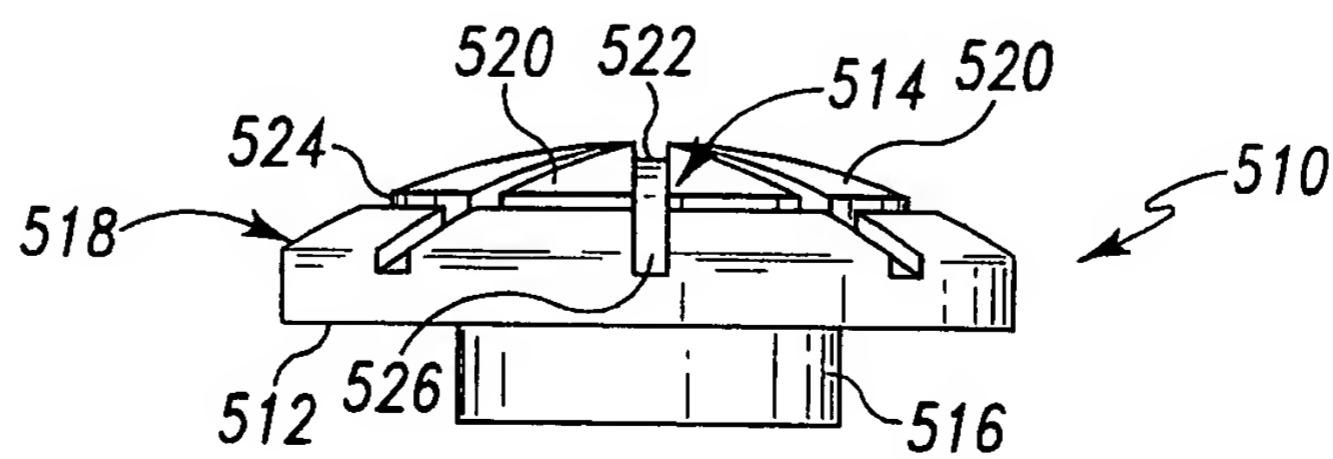


Fig. 13

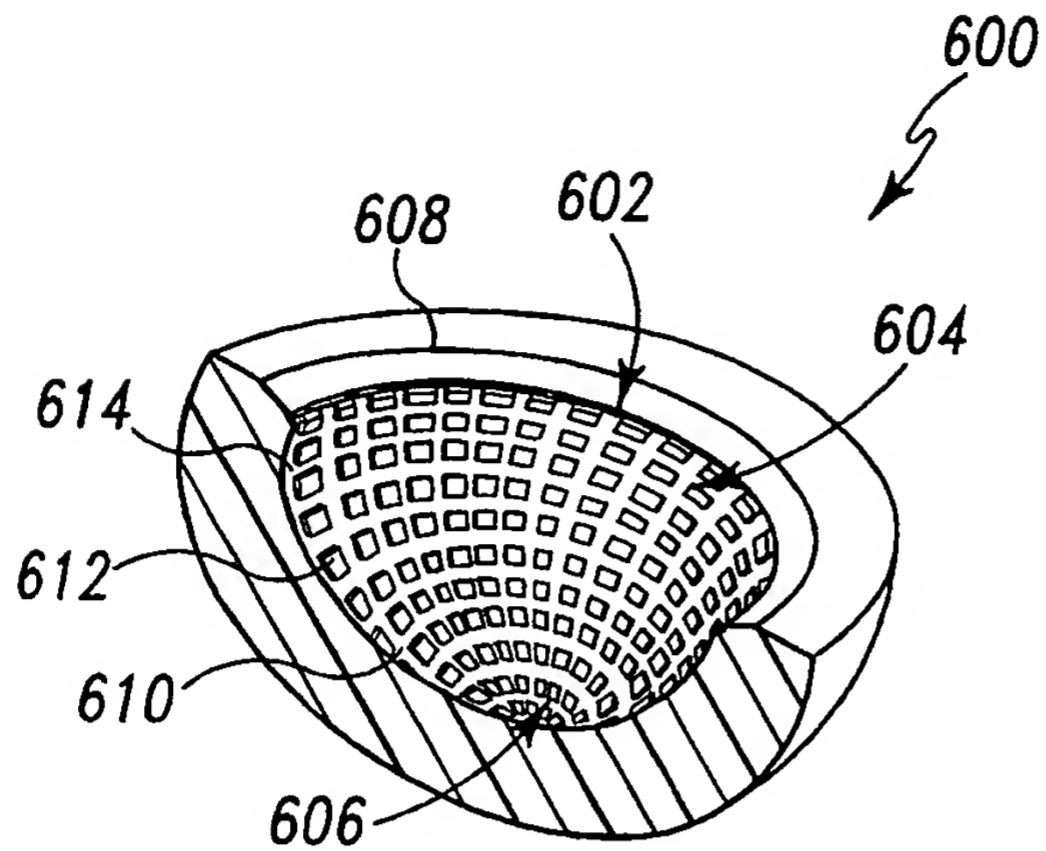


Fig. 9

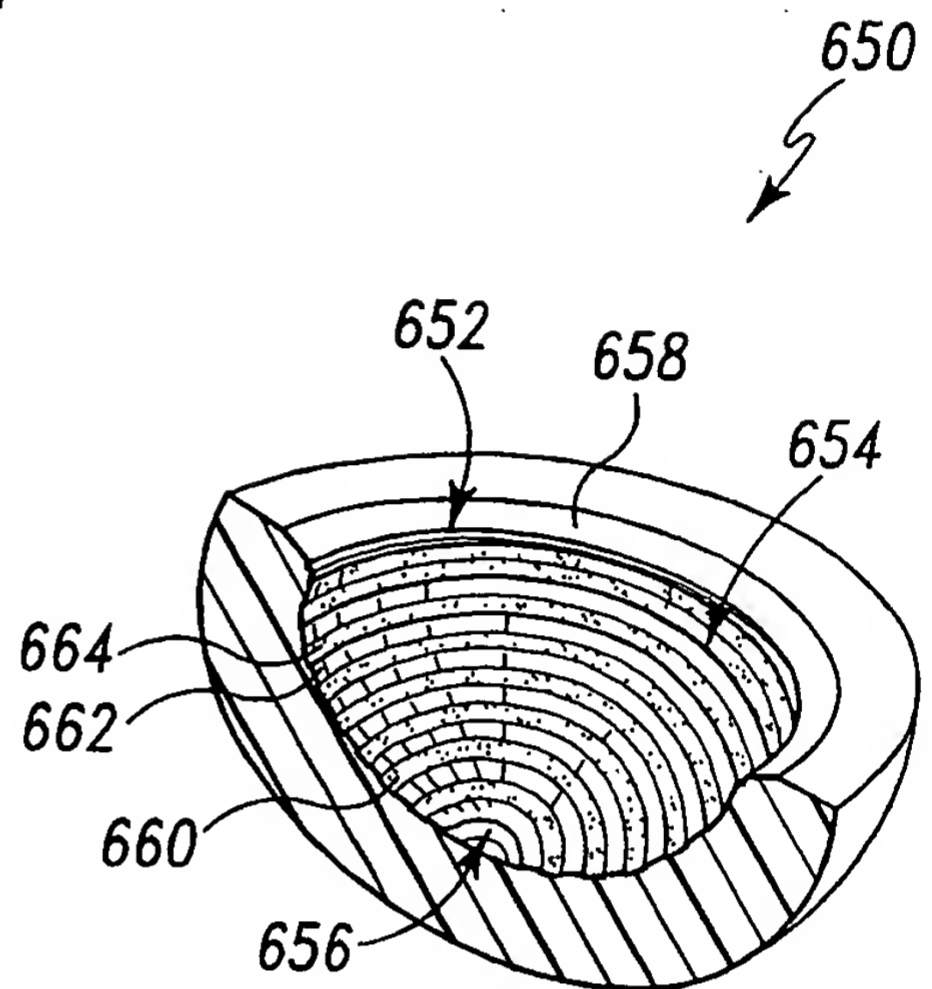


Fig. 10

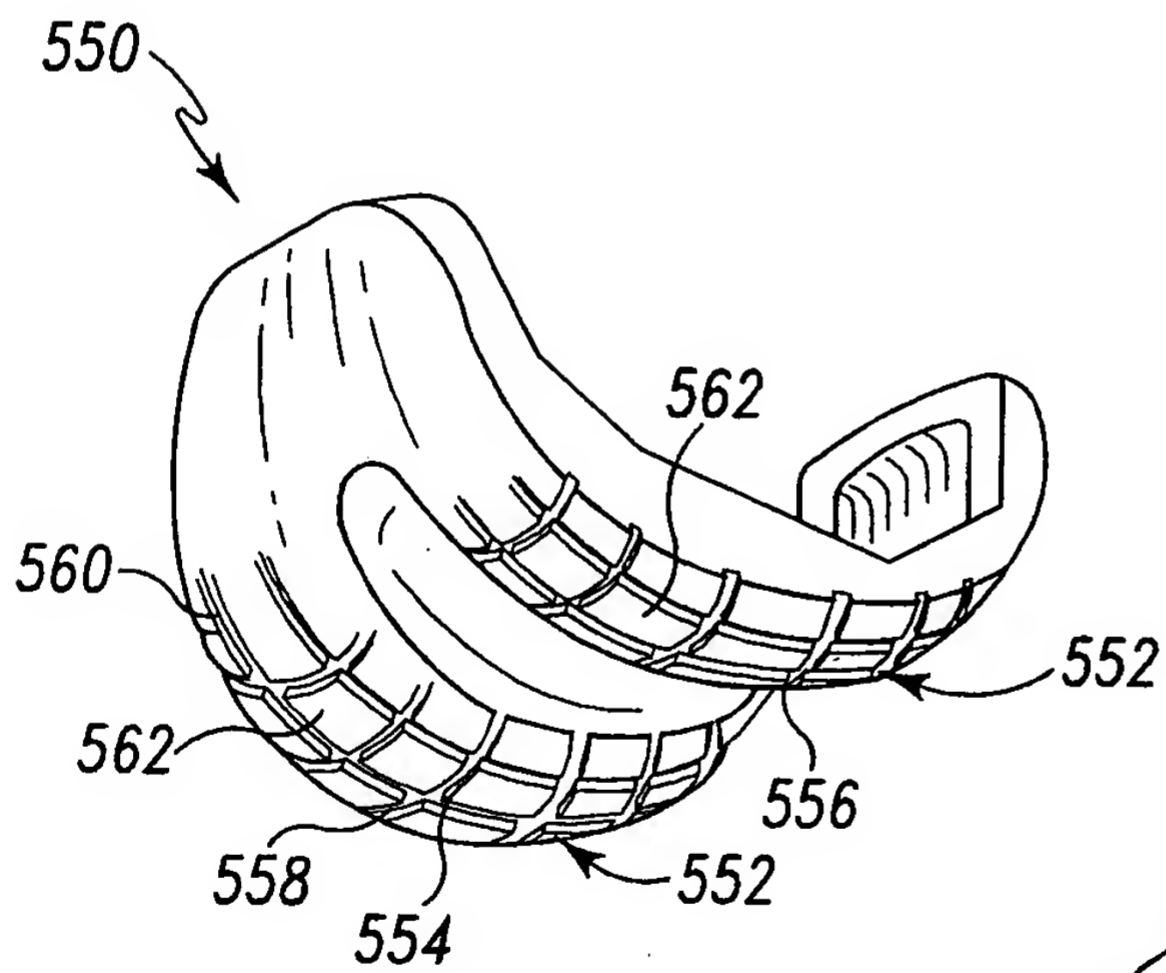


Fig. 14

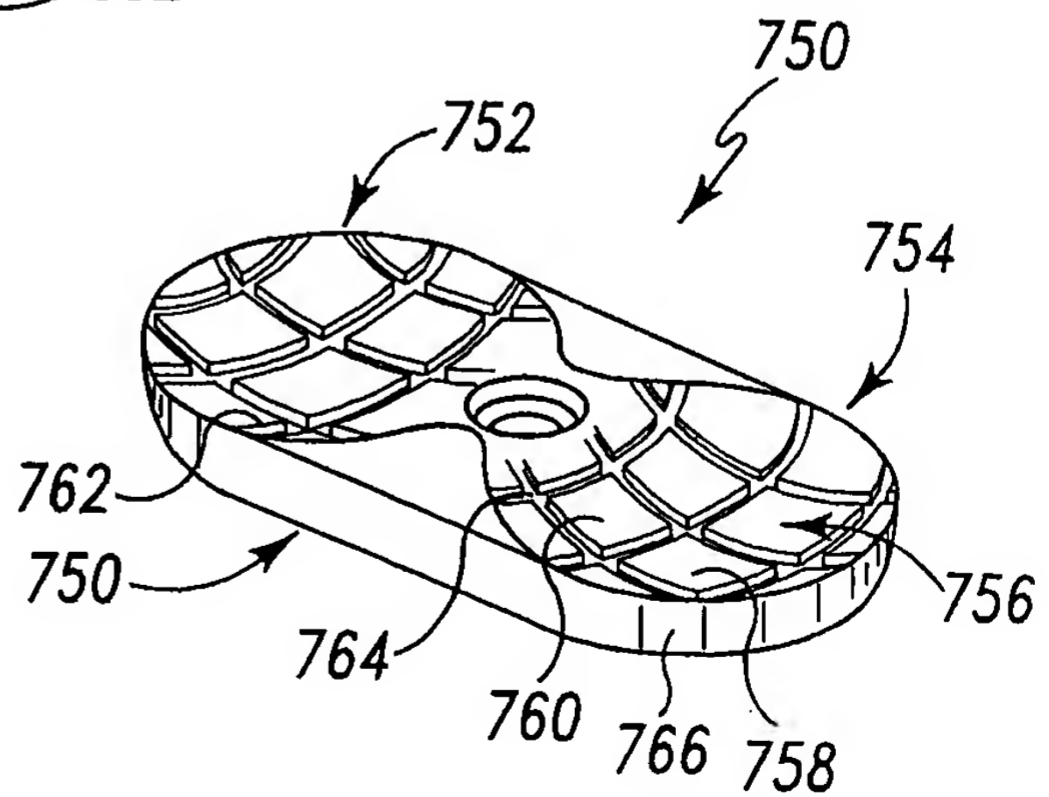


Fig. 15

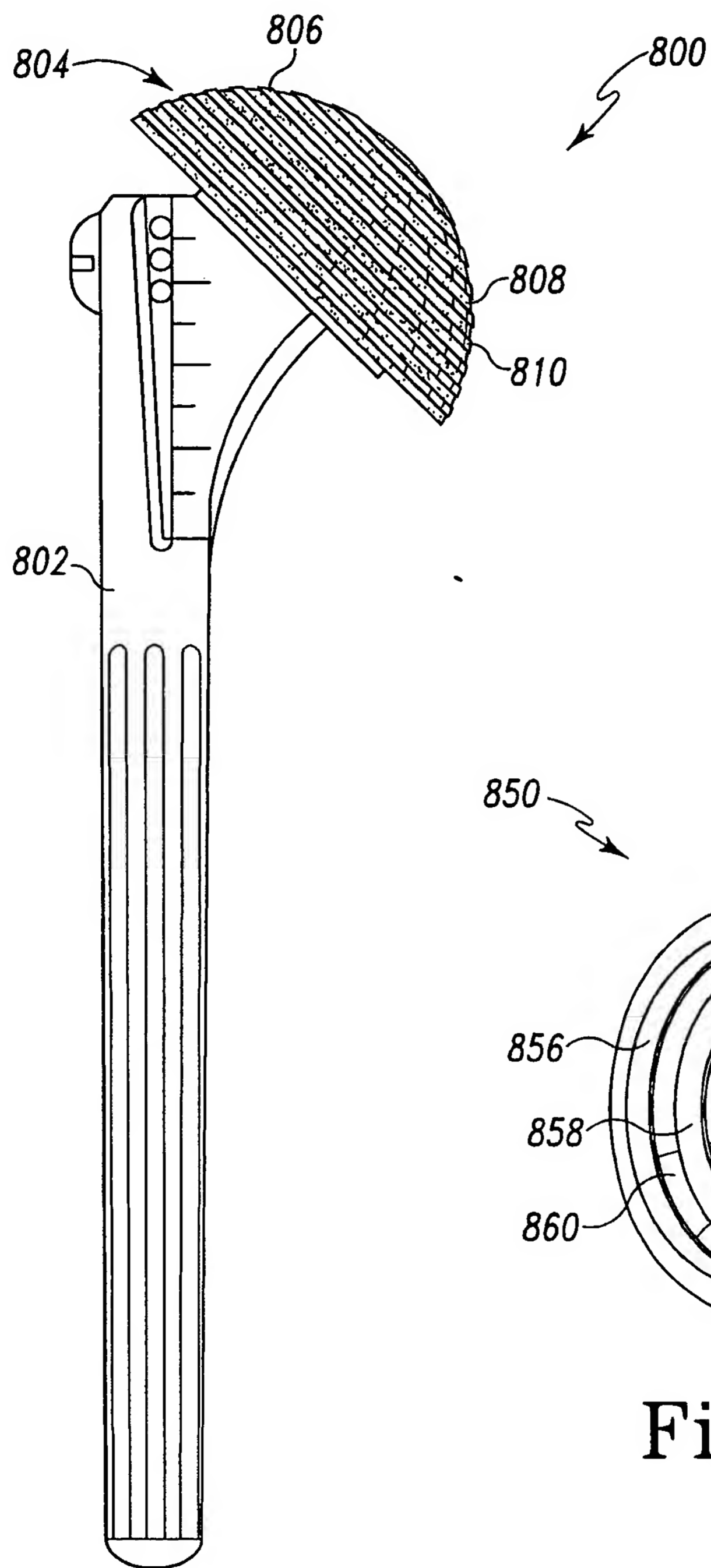


Fig. 16

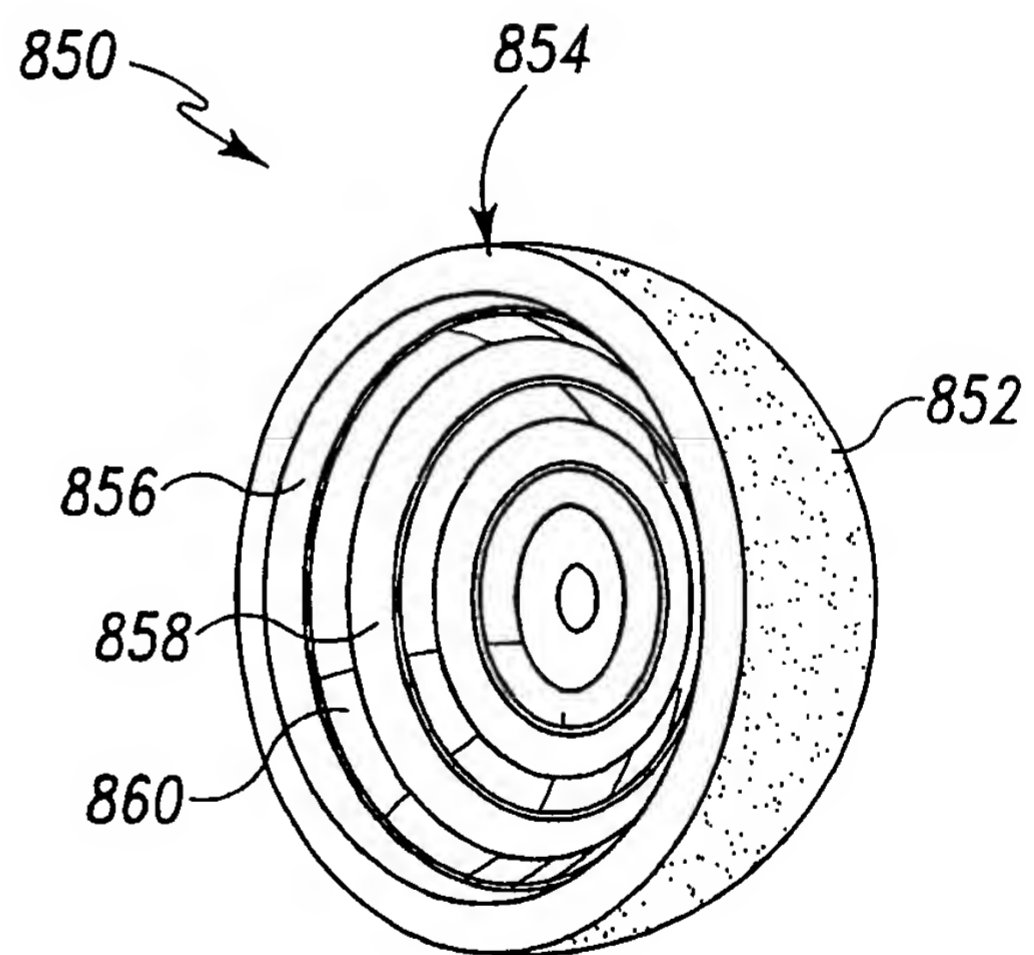


Fig. 17

COBALT CHROMIUM ON COBALT CHROMIUM

SYNCHRONAL (mm)	40 μm		60 μm		80 μm		100 μm		120 μm	
	AREA (mm ²)	% AREA OF RELIEF (OR UNINTERRUPTED CONTACT AREA)	AREA (mm ²)	% AREA OF RELIEF (OR UNINTERRUPTED CONTACT AREA)	AREA (mm ²)	% AREA OF RELIEF (OR UNINTERRUPTED CONTACT AREA)	AREA (mm ²)	% AREA OF RELIEF (OR UNINTERRUPTED CONTACT AREA)	AREA (mm ²)	% AREA OF RELIEF (OR UNINTERRUPTED CONTACT AREA)
22	59.65	0.0	45.55		37.62		32.44		26.74	
23	63.29	5.7	48.32		39.91		34.42		30.49	
24	66.98	10.9	51.14		42.24		36.42		32.27	
25	70.72	15.7	54.00		44.60		38.45		34.07	
26	74.51	20.0	56.89		46.99		40.15		35.90	
27	78.36	23.9	59.83	0.3	49.41		42.60		37.74	
28	82.25	27.5	62.80	5.0	51.86		44.71		39.62	
29	86.18	30.8	65.80	9.4	54.34		46.85		41.51	
30	90.17	33.8	68.84	13.4	56.85		49.02		43.42	
31	94.19	36.7	71.91	17.1	59.39		51.20		45.36	
32	98.26	39.3	75.02	20.5	61.95	3.7	53.41		47.32	
33	102.38	41.7	78.16	23.7	64.55	7.6	55.65		49.30	
34	106.53	44.0	81.33	26.7	67.16	11.2	57.90		51.30	
35	110.73	46.1	84.53	29.4	69.81	14.6	60.18	0.9	53.31	
36	114.96	48.1	87.77	32.0	72.48	17.7	62.48	4.5	55.35	
37	119.24	50.0	91.03	34.5	75.17	20.6	64.80	8.0	57.41	
38	123.55	51.7	94.32	36.8	77.89	23.4	67.14	11.2	59.48	
39	127.90	53.4	97.64	38.9	80.63	26.0	69.51	14.2	61.57	3.1
40	132.29	54.9	100.99	40.9	83.39	28.5	71.89	17.0	63.68	6.3
41	136.72	56.4	104.37	42.9	86.18	30.8	74.29	19.7	65.81	9.4
42	141.18	57.8	107.77	44.7	88.99	33.0	76.72	22.3	67.96	12.2
43	145.68	59.1	111.21	46.4	91.83	35.0	79.16	24.6	70.12	14.9
44	150.21	60.3	114.67	48.0	94.68	37.0	81.62	26.9	72.30	17.5
45	154.78	61.5	118.15	49.5	97.56	38.9	84.10	29.1	74.50	19.9
46	159.38	62.6	121.66	51.0	100.46	40.6	86.60	31.1	76.71	22.2
47	164.01	63.6	125.20	52.4	103.38	42.3	89.12	33.1	78.94	24.4
48	168.68	64.6	128.76	53.7	106.32	43.9	91.65	34.9	81.18	26.5
49	173.38	65.6	132.35	54.9	109.28	45.4	94.20	36.7	83.44	28.5
50	178.11	66.5	135.96	56.1	112.26	46.9	96.77	38.4	85.72	30.4
51	182.87	67.4	139.60	57.3	115.26	48.3	99.36	40.0	88.01	32.2
52	187.67	68.2	143.25	58.4	118.28	49.6	101.96	41.5	90.31	34.0
53	192.49	69.0	146.94	59.4	121.32	50.8	104.58	43.0	92.63	35.6
54	197.35	69.8	150.64	60.4	124.38	52.0	107.22	44.4	94.97	37.2
55	202.24	70.5	154.37	61.4	127.46	53.2	109.87	45.7	97.32	38.7
56	207.15	71.2	158.12	62.3	130.56	54.3	112.54	47.0	99.68	40.2
57	212.10	71.9	161.90	63.2	133.68	55.4	115.22	48.2	102.06	41.6
58	217.07	72.5	165.69	64.0	136.81	56.4	117.93	49.4	104.45	42.9
59	222.07	73.1	169.51	64.8	139.96	57.4	120.64	50.6	106.86	44.2
60	227.11	73.7	173.35	65.6	143.13	58.3	123.37	51.7	109.28	45.4

BASELINE CONTACT AREA

MINIMUM X AREA OF RELIEF (COMPARED WITH UNINTERRUPTED BEARING SURFACE)
 MINIMUM X AREA OF RELIEF (COMPARED WITH TOTAL ARTICULAR SURFACE)
 MAXIMUM X AREA OF RELIEF (COMPARED WITH UNINTERRUPTED BEARING SURFACE)
 MAXIMUM X AREA OF RELIEF (COMPARED WITH TOTAL ARTICULAR SURFACE)

Fig. 18

METAL-METAL

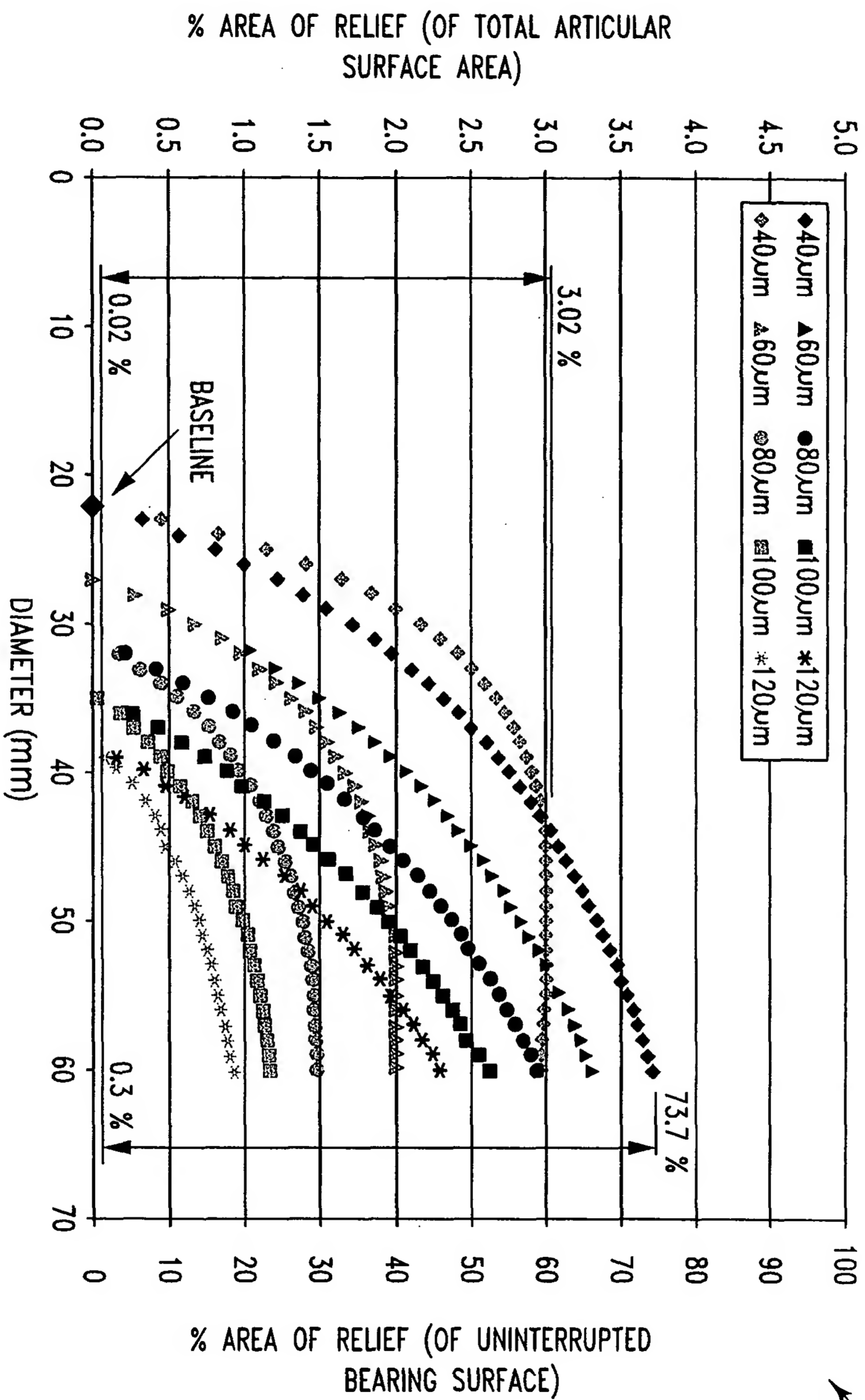


Fig. 19

CERAMIC ON CERAMIC

SPINDLE (mm)	40 μ m				60 μ m				80 μ m				100 μ m				120 μ m			
	AREA (mm ²)	X AREA OF RELIEF (OF UNINTERRUPTED CONTACT AREA)	X AREA OF RELIEF (OF TOTAL ARTICULAR SURFACE AREA)	AREA (mm ²)	X AREA OF RELIEF (OF UNINTERRUPTED CONTACT AREA)	X AREA OF RELIEF (OF TOTAL ARTICULAR SURFACE AREA)	AREA (mm ²)	X AREA OF RELIEF (OF UNINTERRUPTED CONTACT AREA)	X AREA OF RELIEF (OF TOTAL ARTICULAR SURFACE AREA)	AREA (mm ²)	X AREA OF RELIEF (OF UNINTERRUPTED CONTACT AREA)	X AREA OF RELIEF (OF TOTAL ARTICULAR SURFACE AREA)	AREA (mm ²)	X AREA OF RELIEF (OF UNINTERRUPTED CONTACT AREA)	X AREA OF RELIEF (OF TOTAL ARTICULAR SURFACE AREA)	AREA (mm ²)	X AREA OF RELIEF (OF UNINTERRUPTED CONTACT AREA)	X AREA OF RELIEF (OF TOTAL ARTICULAR SURFACE AREA)		
22	42.43	0.0	0.00	32.40			26.76			23.08			20.45							
23	45.02	5.7	0.31	34.38			28.39			24.48			21.69							
24	47.65	10.9	0.58	36.38			30.05			25.91			22.96							
25	50.31	15.7	0.80	38.41			31.73			27.36			24.24							
26	53.01	20.0	1.00	40.47			33.43			28.82			25.54							
27	55.74	23.9	1.16	42.56	0.3	0.01	35.15			30.31			26.85							
28	59.51	27.5	1.31	44.67	5.0	0.18	36.89			31.81			28.18							
29	61.31	30.8	1.43	46.81	9.4	0.33	38.66			33.33			29.53							
30	64.14	33.8	1.54	48.97	13.4	0.46	40.44			34.87			30.89							
31	67.01	36.7	1.63	51.16	17.1	0.58	42.25			36.42			32.27							
32	69.90	39.3	1.71	53.37	20.5	0.68	44.07	3.7	0.10	38.00			33.66							
33	72.83	41.7	1.78	55.60	23.7	0.77	45.92	7.6	0.20	39.59			35.07							
34	75.78	44.0	1.84	57.86	26.7	0.85	47.78	11.2	0.29	41.19			36.49							
35	78.77	46.1	1.89	60.13	29.4	0.92	49.66	14.6	0.38	42.81	0.9	0.02	37.93							
36	81.78	48.1	1.93	62.43	32.0	0.98	51.56	17.7	0.45	44.45	4.5	0.10	39.37							
37	84.82	50.0	1.97	64.76	34.5	1.04	53.47	20.6	0.51	46.10	8.0	0.17	40.84							
38	87.89	51.7	2.00	67.10	36.8	1.09	55.41	23.4	0.57	47.77	11.2	0.24	42.31							
39	90.99	53.4	2.03	60.46	38.9	1.13	57.36	26.0	0.62	49.45	14.2	0.29	43.80							
40	94.11	54.9	2.06	71.84	40.9	1.17	59.33	28.5	0.67	51.14	17.0	0.35	45.30							
41	97.26	56.4	2.08	74.25	42.9	1.20	61.31	30.8	0.71	52.85	19.7	0.39	46.82							
42	100.43	57.8	2.09	76.67	44.7	1.24	63.31	33.0	0.75	54.58	22.3	0.44	48.34							
43	103.63	59.1	2.11	79.11	46.4	1.26	65.32	35.0	0.79	56.31	24.6	0.48	49.88							
44	106.86	60.3	2.12	81.57	48.0	1.29	67.36	37.0	0.82	58.06	26.9	0.51	51.43							
45	110.10	61.5	2.13	84.05	49.5	1.31	69.40	38.9	0.85	59.83	29.1	0.55	53.00							
46	113.38	62.6	2.13	86.55	51.0	1.33	71.46	40.6	0.87	61.60	31.1	0.58	54.57							
47	116.67	63.6	2.14	89.06	52.4	1.34	73.54	42.3	0.90	63.39	33.1	0.60	56.15							
48	119.99	64.6	2.14	91.60	53.7	1.36	75.63	43.9	0.92	65.20	34.9	0.63	57.75							
49	123.34	65.6	2.15	94.15	54.9	1.37	77.74	45.4	0.94	67.01	36.7	0.65	59.36							
50	126.70	66.5	2.15	96.72	56.1	1.38	79.86	46.9	0.95	68.84	38.4	0.67	60.98							
51	130.09	67.4	2.15	99.31	57.3	1.39	82.00	48.3	0.97	70.68	40.0	0.69	62.61							
52	133.50	68.2	2.14	101.91	58.4	1.40	84.15	49.6	0.98	72.53	41.5	0.71	64.25							
53	136.94	69.0	2.14	104.53	59.4	1.41	86.31	50.8	0.99	74.40	43.0	0.72	65.90							
54	140.39	69.8	2.14	107.16	60.4	1.41	88.48	52.0	1.01	76.27	44.4	0.74	67.56							
55	143.87	70.5	2.13	109.82	61.4	1.42	90.67	53.2	1.02	78.16	45.7	0.75	69.23							
56	147.36	71.2	2.13	112.49	62.3	1.42	92.88	54.3	1.02	80.06	47.0	0.76	70.91							
57	150.88	71.9	2.13	115.17	63.2	1.43	95.09	55.4	1.03	81.97	48.2	0.77	72.60							
58	154.42	72.5	2.12	117.87	64.0	1.43	97.32	56.4	1.04	83.89	49.4	0.78	74.31							
59	157.98	73.1	2.11	120.59	64.8	1.43	99.57	57.4	1.04	85.82	50.6	0.79	76.02							
60	161.56	73.7	2.11	123.32	65.6	1.43	101.82	58.3	1.05	87.77	51.7	0.80	77.74							

BASELINE CONTACT AREA
 MINIMUM % AREA OF RELIEF (COMPARED WITH UNINTERRUPTED BEARING SURFACE)
 MINIMUM % AREA OF RELIEF (COMPARED WITH TOTAL ARTICULAR SURFACE)
 MAXIMUM % AREA OF RELIEF (COMPARED WITH UNINTERRUPTED BEARING SURFACE)
 MAXIMUM % AREA OF RELIEF (COMPARED WITH TOTAL ARTICULAR SURFACE)

Fig. 20

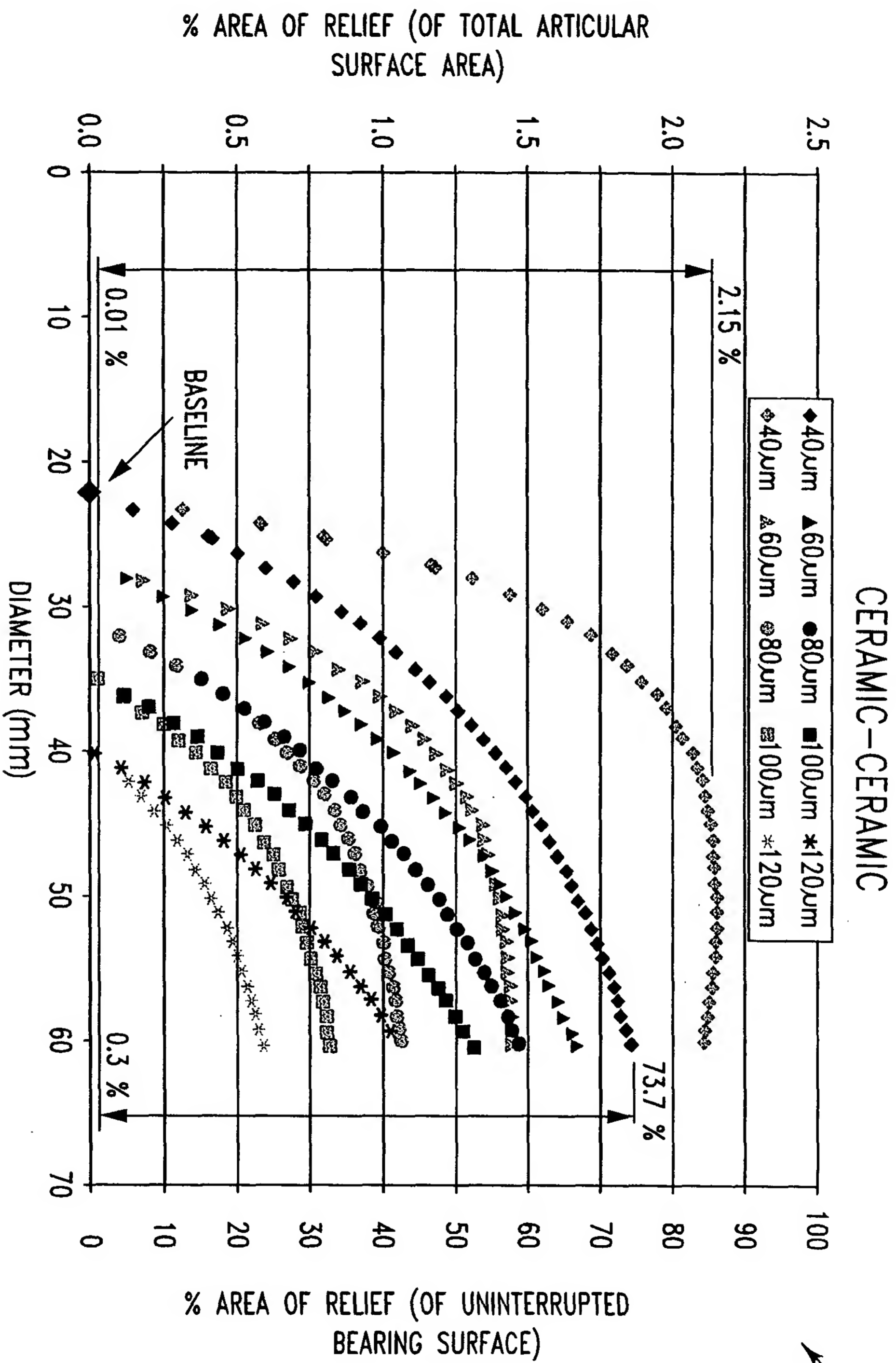


Fig. 21

COBALT CHROMIUM ON POLYETHYLENE

Φ NOMINAL (mm)	300 μm			400 μm			500 μm			600 μm		
	AREA (mm ²)	% AREA OF RELIEF (OF UNINTERRUPTED CONTACT AREA)	% AREA OF RELIEF (OF TOTAL ARTICULAR SURFACE AREA)	AREA (mm ²)	% AREA OF RELIEF (OF UNINTERRUPTED CONTACT AREA)	% AREA OF RELIEF (OF TOTAL ARTICULAR SURFACE AREA)	AREA (mm ²)	% AREA OF RELIEF (OF UNINTERRUPTED CONTACT AREA)	% AREA OF RELIEF (OF TOTAL ARTICULAR SURFACE AREA)	AREA (mm ²)	% AREA OF RELIEF (OF UNINTERRUPTED CONTACT AREA)	% AREA OF RELIEF (OF TOTAL ARTICULAR SURFACE AREA)
22	504.69	36.4	24.19	417.85	23.2	12.77	361.17	11.2	5.31	320.78	0.0	0.00
23	535.29	40.1	25.82	443.14	27.6	14.73	382.97	16.2	7.49	340.10	5.7	2.33
24	566.34	43.4	27.14	468.79	31.6	16.36	405.09	20.8	9.32	359.71	10.8	4.30
25	597.83	46.3	28.22	494.80	35.2	17.73	427.52	25.0	10.87	379.58	15.5	5.99
26	629.73	49.1	29.10	521.15	38.4	18.87	450.25	28.8	12.19	399.72	19.7	7.43
27	662.04	51.5	29.80	547.84	41.4	19.83	473.26	32.2	13.32	420.11	23.6	8.67
28	694.76	53.8	30.37	574.86	44.2	20.63	496.56	35.4	14.27	440.76	27.2	9.74
29	727.86	55.9	30.82	602.20	46.7	21.30	520.14	38.3	15.09	461.65	30.5	10.66
30	761.34	57.9	31.16	629.85	49.1	21.86	543.98	41.0	15.79	482.77	33.6	11.46
31	795.19	59.7	31.43	657.82	51.2	22.33	568.09	43.5	16.38	504.14	36.4	12.15
32	829.41	61.3	31.62	686.08	53.2	22.71	592.46	45.9	16.89	525.73	39.0	12.74
33	863.99	62.9	31.76	714.63	55.1	23.03	617.08	48.0	17.32	547.54	41.4	13.26
34	898.91	64.3	31.84	743.48	56.9	23.28	641.95	50.0	17.69	569.58	43.7	13.70
35	934.18	65.7	31.88	772.60	58.5	23.48	667.06	51.9	18.00	591.83	45.8	14.09
36	969.78	66.9	31.88	802.01	60.0	23.64	692.42	53.7	18.26	614.29	47.8	14.42
37	1005.72	68.1	31.85	831.68	61.4	23.76	718.00	55.3	18.47	636.95	49.6	14.70
38	1041.97	69.2	31.80	861.63	62.8	23.85	743.82	56.9	18.65	659.83	51.4	14.95
39	1078.55	70.3	31.72	891.83	64.0	23.90	769.86	58.3	18.80	682.90	53.0	15.16
40	1115.44	71.2	31.62	922.30	65.2	23.93	796.12	59.7	18.91	706.17	54.6	15.33
41	1152.63	72.2	31.50	953.01	66.3	23.94	822.60	61.0	19.01	729.63	56.0	15.48
42	1190.13	73.0	31.38	983.98	67.4	23.94	849.30	62.2	19.07	753.28	57.4	15.61
43	1227.93	73.9	31.23	1015.19	68.4	23.91	876.21	63.4	19.12	777.12	58.7	15.71
44	1266.02	74.7	31.08	1046.65	69.4	23.87	903.33	64.5	19.16	801.14	60.0	15.80
45	1304.40	75.4	30.92	1078.34	70.3	23.82	930.65	65.5	19.17	825.34	61.1	15.86
46	1343.06	76.1	30.76	1110.27	71.1	23.75	958.17	66.5	19.18	849.72	62.2	15.91
47	1382.00	76.8	30.58	1142.42	71.9	23.68	985.90	67.5	19.17	874.28	63.3	15.95
48	1421.22	77.4	30.41	1174.81	72.7	23.60	1013.81	68.4	19.15	899.02	64.3	15.98
49	1460.71	78.0	30.23	1207.42	73.4	23.51	1041.93	69.2	19.12	923.92	65.3	15.99
50	1500.47	78.6	30.04	1240.25	74.1	23.41	1070.23	70.0	19.09	948.99	66.2	16.00
51	1540.50	79.2	29.85	1273.30	74.8	23.31	1098.72	70.8	19.04	974.23	67.1	16.01
52	1580.78	79.7	29.67	1306.57	75.4	23.21	1127.40	71.5	18.99	999.64	67.9	16.01
53	1621.33	80.2	29.48	1340.05	76.1	23.10	1156.26	72.3	18.94	1025.20	68.7	16.01
54	1662.13	80.7	29.29	1373.74	76.6	22.99	1185.30	72.9	18.87	1050.93	69.5	16.01
55	1703.18	81.2	29.09	1407.64	77.2	22.87	1214.53	73.6	18.81	1076.81	70.2	16.01
56	1744.48	81.6	28.90	1441.74	77.8	22.76	1243.92	74.2	18.74	1102.86	70.9	16.01
57	1786.03	82.0	28.71	1476.05	78.3	22.64	1273.50	74.8	18.67	1129.05	71.6	16.01
58	1827.82	82.5	28.52	1510.56	78.8	22.52	1303.24	75.4	18.59	1155.40	72.2	16.01
59	1869.85	82.8	28.33	1545.26	79.2	22.39	1333.16	75.9	18.52	1181.90	72.9	16.01
60	1912.12	83.2	28.14	1580.16	79.7	22.27	1363.25	76.5	18.44	1208.55	73.5	16.01

BASELINE CONTACT AREA
 MINIMUM % AREA OF RELIEF (COMPARED WITH UNINTERRUPTED BEARING SURFACE)
 MINIMUM % AREA OF RELIEF (COMPARED WITH TOTAL ARTICULAR SURFACE)
 MAXIMUM % AREA OF RELIEF (COMPARED WITH UNINTERRUPTED BEARING SURFACE)
 MAXIMUM % AREA OF RELIEF (COMPARED WITH TOTAL ARTICULAR SURFACE)

Fig. 22

CoCr-PE

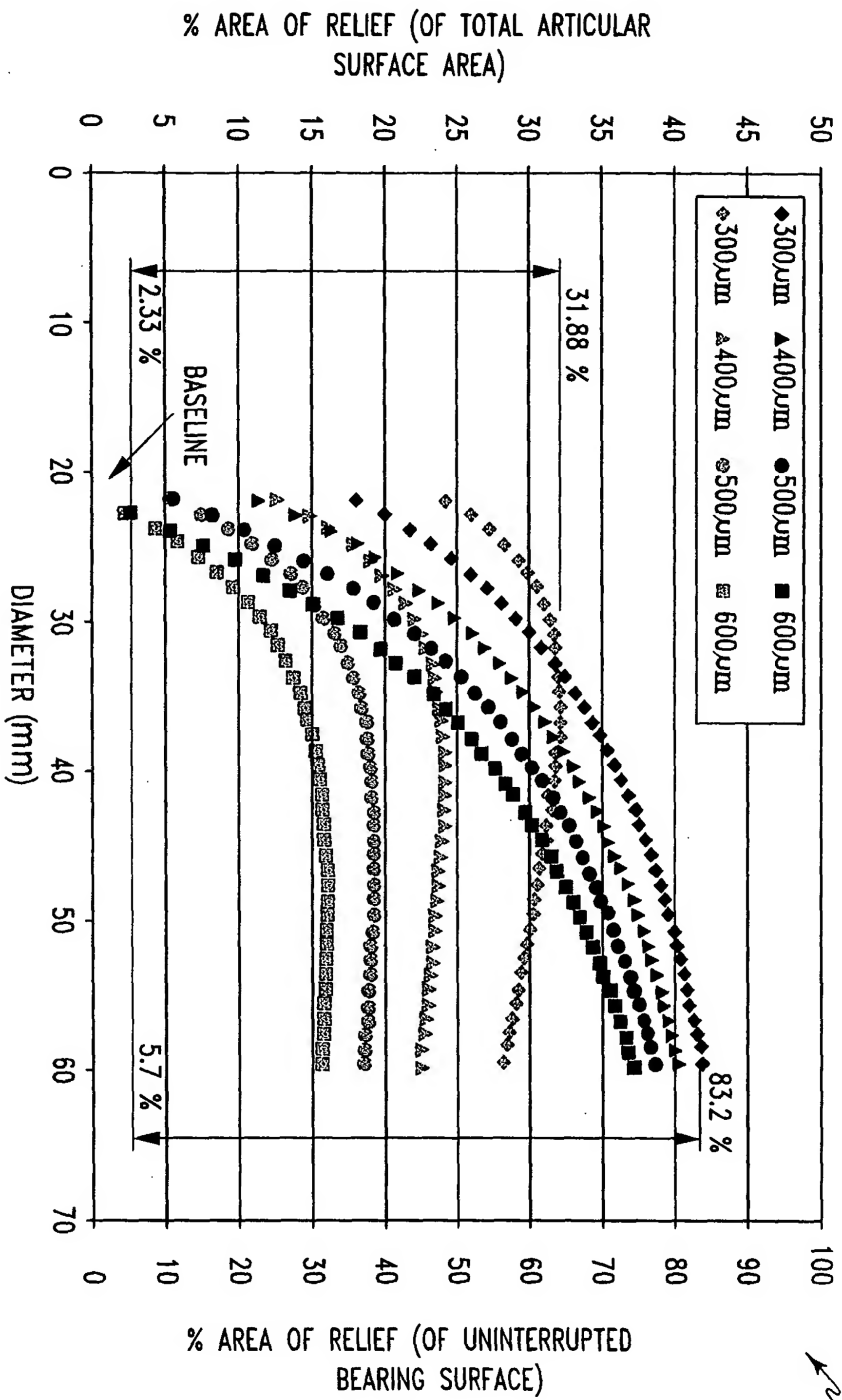


Fig. 23